

SEQUENCE LISTING

<110> Chen, Xiaojiang
Holers, V. Michael

<120> THREE-DIMENSIONAL STRUCTURE OF COMPLEMENT RECEPTOR TYPE 2 AND USES THEREOF

<130> 2848-43

<160> 9

<170> PatentIn version 3.0

<210> 1

<211> 1033

<212> PRT

<213> Homo sapiens

<400> 1

Met Gly Ala Ala Gly Leu Leu Gly Val Phe Leu Ala Leu Val Ala Pro
1 5 10 15

Gly Val Leu Gly Ile Ser Cys Gly Ser Pro Pro Pro Ile Leu Asn Gly
20 25 30

Arg Ile Ser Tyr Tyr Ser Thr Pro Ile Ala Val Gly Thr Val Ile Arg
35 40 45

Tyr Ser Cys Ser Gly Thr Phe Arg Leu Ile Gly Glu Lys Ser Leu Leu
50 55 60

Cys Ile Thr Lys Asp Lys Val Asp Gly Thr Trp Asp Lys Pro Ala Pro
65 70 75 80

Lys Cys Glu Tyr Phe Asn Lys Tyr Ser Ser Cys Pro Glu Pro Ile Val
85 90 95

Pro Gly Gly Tyr Lys Ile Arg Gly Ser Thr Pro Tyr Arg His Gly Asp
100 105 110

Ser Val Thr Phe Ala Cys Lys Thr Asn Phe Ser Met Asn Gly Asn Lys
115 120 125

Ser Val Trp Cys Gln Ala Asn Asn Met Trp Gly Pro Thr Arg Leu Pro
130 135 140

Thr Cys Val Ser Val Phe Pro Leu Glu Cys Pro Ala Leu Pro Met Ile
145 150 155 160

His Asn Gly His His Thr Ser Glu Asn Val Gly Ser Ile Ala Pro Gly
165 170 175

Leu Ser Val Thr Tyr Ser Cys Glu Ser Gly Tyr Leu Leu Val Gly Glu
180 185 190

Lys Ile Ile Asn Cys Leu Ser Ser Gly Lys Trp Ser Ala Val Pro Pro
 195 200 205
 Thr Cys Glu Glu Ala Arg Cys Lys Ser Leu Gly Arg Phe Pro Asn Gly
 210 215 220
 Lys Val Lys Glu Pro Pro Ile Leu Arg Val Gly Val Thr Ala Asn Phe
 225 230 235 240
 Phe Cys Asp Glu Gly Tyr Arg Leu Gln Gly Pro Pro Ser Ser Arg Cys
 245 250 255
 Val Ile Ala Gly Gln Gly Val Ala Trp Thr Lys Met Pro Val Cys Glu
 260 265 270
 Glu Ile Phe Cys Pro Ser Pro Pro Pro Ile Leu Asn Gly Arg His Ile
 275 280 285
 Gly Asn Ser Leu Ala Asn Val Ser Tyr Gly Ser Ile Val Thr Tyr Thr
 290 295 300
 Cys Asp Pro Asp Pro Glu Glu Gly Val Asn Phe Ile Leu Ile Gly Glu
 305 310 315 320
 Ser Thr Leu Arg Cys Thr Val Asp Ser Gln Lys Thr Gly Thr Trp Ser
 325 330 335
 Gly Pro Ala Pro Arg Cys Glu Leu Ser Thr Ser Ala Val Gln Cys Pro
 340 345 350
 His Pro Gln Ile Leu Arg Gly Arg Met Val Ser Gly Gln Lys Asp Arg
 355 360 365
 Tyr Thr Tyr Asn Asp Thr Val Ile Phe Ala Cys Met Phe Gly Phe Thr
 370 375 380
 Leu Lys Gly Ser Lys Gln Ile Arg Cys Asn Ala Gln Gly Thr Trp Glu
 385 390 395 400
 Pro Ser Ala Pro Val Cys Glu Lys Glu Cys Gln Ala Pro Pro Asn Ile
 405 410 415
 Leu Asn Gly Gln Lys Glu Asp Arg His Met Val Arg Phe Asp Pro Gly
 420 425 430
 Thr Ser Ile Lys Tyr Ser Cys Asn Pro Gly Tyr Val Leu Val Gly Glu
 435 440 445
 Glu Ser Ile Gln Cys Thr Ser Glu Gly Val Trp Thr Pro Pro Val Pro
 450 455 460
 Gln Cys Lys Val Ala Ala Cys Glu Ala Thr Gly Arg Gln Leu Leu Thr
 465 470 475 480

Lys Pro Gln His Gln Phe Val Arg Pro Asp Val Asn Ser Ser Cys Gly
 485 490 495
 Glu Gly Tyr Lys Leu Ser Gly Ser Val Tyr Gln Glu Cys Gln Gly Thr
 500 505 510
 Ile Pro Trp Phe Met Glu Ile Arg Leu Cys Lys Glu Ile Thr Cys Pro
 515 520 525
 Pro Pro Pro Val Ile Tyr Asn Gly Ala His Thr Gly Ser Ser Leu Glu
 530 535 540
 Asp Phe Pro Tyr Gly Thr Thr Val Thr Tyr Thr Cys Asn Pro Gly Pro
 545 550 555 560
 Glu Arg Gly Val Glu Phe Ser Leu Ile Gly Glu Ser Thr Ile Arg Cys
 565 570 575
 Thr Ser Asn Asp Gln Glu Arg Gly Thr Trp Ser Gly Pro Ala Pro Leu
 580 585 590
 Cys Lys Leu Ser Leu Leu Ala Val Gln Cys Ser His Val His Ile Ala
 595 600 605
 Asn Gly Tyr Lys Ile Ser Gly Lys Glu Ala Pro Tyr Phe Tyr Asn Asp
 610 615 620
 Thr Val Thr Phe Lys Cys Tyr Ser Gly Phe Thr Leu Lys Gly Ser Ser
 625 630 635 640
 Gln Ile Arg Cys Lys Ala Asp Asn Thr Trp Asp Pro Glu Ile Pro Val
 645 650 655
 Cys Glu Lys Glu Thr Cys Gln His Val Arg Gln Ser Leu Gln Glu Leu
 660 665 670
 Pro Ala Gly Ser Arg Val Glu Leu Val Asn Thr Ser Cys Gln Asp Gly
 675 680 685
 Tyr Gln Leu Thr Gly His Ala Tyr Gln Met Cys Gln Asp Ala Glu Asn
 690 695 700
 Gly Ile Trp Phe Lys Lys Ile Pro Leu Cys Lys Val Ile His Cys His
 705 710 715 720
 Pro Pro Pro Val Ile Val Asn Gly Lys His Thr Gly Met Met Ala Glu
 725 730 735
 Asn Phe Leu Tyr Gly Asn Glu Val Ser Tyr Glu Cys Asp Gln Gly Phe
 740 745 750
 Tyr Leu Leu Gly Glu Lys Lys Leu Gln Cys Arg Ser Asp Ser Lys Gly
 755 760 765
 His Gly Ser Trp Ser Gly Pro Ser Pro Gln Cys Leu Arg Ser Pro Pro

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      770              775              780
Val Thr Arg Cys Pro Asn Pro Glu Val Lys His Gly Tyr Lys Leu Asn
785              790              795              800

Lys Thr His Ser Ala Tyr Ser His Asn Asp Ile Val Tyr Val Asp Cys
      805              810              815

Asn Pro Gly Phe Ile Met Asn Gly Ser Arg Val Ile Arg Cys His Thr
      820              825              830

Asp Asn Thr Trp Val Pro Gly Val Pro Thr Cys Met Lys Lys Ala Phe
      835              840              845

Ile Gly Cys Pro Pro Pro Pro Lys Thr Pro Asn Gly Asn His Thr Gly
      850              855              860

Gly Asn Ile Ala Arg Phe Ser Pro Gly Met Ser Ile Leu Tyr Ser Cys
      865              870              875              880

Asp Gln Gly Tyr Leu Leu Val Gly Glu Ala Leu Leu Leu Cys Thr His
      885              890              895

Glu Gly Thr Trp Ser Gln Pro Ala Pro His Cys Lys Glu Val Asn Cys
      900              905              910

Ser Ser Pro Ala Asp Met Asp Gly Ile Gln Lys Gly Leu Glu Pro Arg
      915              920              925

Lys Met Tyr Gln Tyr Gly Ala Val Val Thr Leu Glu Cys Glu Asp Gly
      930              935              940

Tyr Met Leu Glu Gly Ser Pro Gln Ser Gln Cys Gln Ser Asp His Gln
      945              950              955              960

Trp Asn Pro Pro Leu Ala Val Cys Arg Ser Arg Ser Leu Ala Pro Val
      965              970              975

Leu Cys Gly Ile Ala Ala Gly Leu Ile Leu Leu Thr Phe Leu Ile Val
      980              985              990

Ile Thr Leu Tyr Val Ile Ser Lys His Arg Glu Arg Asn Tyr Tyr Thr
      995              1000              1005

Asp Thr Ser Gln Lys Glu Ala Phe His Leu Glu Ala Arg Glu Val
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Tyr Ser Val Asp Pro Tyr Asn Pro Ala Ser
      1025              1030

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<210> 2
<211> 60
<212> PRT
<213> Homo sapiens

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<400> 2

Cys Gly Ser Pro Pro Pro Ile Leu Asn Gly Arg Ile Ser Tyr Tyr Ser
1 5 10 15

Thr Pro Ile Ala Val Gly Thr Val Ile Arg Tyr Ser Cys Ser Gly Thr
20 25 30

Phe Arg Leu Ile Gly Glu Lys Ser Leu Leu Cys Ile Thr Lys Asp Lys
35 40 45

Val Asp Gly Thr Trp Asp Lys Pro Ala Pro Lys Cys
50 55 60

<210> 3

<211> 56

<212> PRT

<213> Homo sapiens

<400> 3

Cys Pro Glu Pro Ile Val Pro Gly Gly Tyr Lys Ile Arg Gly Ser Thr
1 5 10 15

Pro Tyr Arg His Gly Asp Ser Val Thr Phe Ala Cys Lys Thr Asn Phe
20 25 30

Ser Met Asn Gly Asn Lys Ser Val Trp Cys Gln Ala Asn Asn Met Trp
35 40 45

Gly Pro Thr Arg Leu Pro Thr Cys
50 55

<210> 4

<211> 134

<212> PRT

<213> Homo sapiens

<400> 4

Gly Ile Ser Cys Gly Ser Pro Pro Pro Ile Leu Asn Gly Arg Ile Ser
1 5 10 15

Tyr Tyr Ser Thr Pro Ile Ala Val Gly Thr Val Ile Arg Tyr Ser Cys
20 25 30

Ser Gly Thr Phe Arg Leu Ile Gly Glu Lys Ser Leu Leu Cys Ile Thr
35 40 45

Lys Asp Lys Val Asp Gly Thr Trp Asp Lys Pro Ala Pro Lys Cys Glu
50 55 60

Tyr Phe Asn Lys Tyr Ser Ser Cys Pro Glu Pro Ile Val Pro Gly Gly
65 70 75 80

Tyr Lys Ile Arg Gly Ser Thr Pro Tyr Arg His Gly Asp Ser Val Thr
85 90 95

Phe Ala Cys Lys Thr Asn Phe Ser Met Asn Gly Asn Lys Ser Val Trp
100 105 110

Cys Gln Ala Asn Asn Met Trp Gly Pro Thr Arg Leu Pro Thr Cys Val
115 120 125

Ser Val Phe Pro Leu Glu
130

<210> 5

<211> 1025

<212> PRT

<213> Mus musculus

<400> 5

Met Leu Thr Trp Phe Leu Phe Tyr Phe Ser Glu Ile Ser Cys Asp Pro
1 5 10 15

Pro Pro Glu Val Lys Asn Ala Arg Lys Pro Tyr Tyr Ser Leu Pro Ile
20 25 30

Val Pro Gly Thr Val Leu Arg Tyr Thr Cys Ser Pro Ser Tyr Arg Leu
35 40 45

Ile Gly Glu Lys Ala Ile Phe Cys Ile Ser Glu Asn Gln Val His Ala
50 55 60

Thr Trp Asp Lys Ala Pro Pro Ile Cys Glu Ser Val Asn Lys Thr Ile
65 70 75 80

Ser Cys Ser Asp Pro Ile Val Pro Gly Gly Phe Met Asn Lys Gly Ser
85 90 95

Lys Ala Pro Phe Arg His Gly Asp Ser Val Thr Phe Thr Cys Lys Ala
100 105 110

Asn Phe Thr Met Lys Gly Ser Lys Thr Val Trp Cys Gln Ala Asn Glu
115 120 125

Met Trp Gly Pro Thr Ala Leu Pro Val Cys Glu Ser Asp Phe Pro Leu
130 135 140

Glu Cys Pro Ser Leu Pro Thr Ile His Asn Gly His His Thr Gly Gln
145 150 155 160

His Val Asp Gln Phe Val Ala Gly Leu Ser Val Thr Tyr Ser Cys Glu
165 170 175

Pro Gly Tyr Leu Leu Thr Gly Lys Lys Thr Ile Lys Cys Leu Ser Ser
180 185 190

Gly Asp Trp Asp Gly Val Ile Pro Thr Cys Lys Glu Ala Gln Cys Glu
 195 200 205
 His Pro Gly Lys Phe Pro Asn Gly Gln Val Lys Glu Pro Leu Ser Leu
 210 215 220
 Gln Val Gly Thr Thr Val Tyr Phe Ser Cys Asn Glu Gly Tyr Gln Leu
 225 230 235 240
 Gln Gly Gln Pro Ser Ser Gln Cys Val Ile Val Glu Gln Lys Ala Ile
 245 250 255
 Trp Thr Lys Lys Pro Val Cys Lys Glu Ile Leu Cys Pro Pro Pro Pro
 260 265 270
 Pro Val Arg Asn Gly Ser His Thr Gly Ser Phe Ser Glu Asn Val Pro
 275 280 285
 Tyr Gly Ser Thr Val Thr Tyr Thr Cys Asp Pro Ser Pro Glu Lys Gly
 290 295 300
 Val Ser Phe Thr Leu Ile Gly Glu Lys Thr Ile Asn Cys Thr Thr Gly
 305 310 315 320
 Ser Gln Lys Thr Gly Ile Trp Ser Gly Pro Ala Pro Tyr Cys Val Leu
 325 330 335
 Ser Thr Ser Ala Val Leu Cys Leu Gln Pro Lys Ile Lys Arg Gly Gln
 340 345 350
 Ile Leu Ser Ile Leu Lys Asp Ser Tyr Ser Tyr Asn Asp Thr Val Ala
 355 360 365
 Phe Ser Cys Glu Pro Gly Phe Thr Leu Lys Gly Asn Arg Ser Ile Arg
 370 375 380
 Cys Asn Ala His Gly Thr Trp Glu Pro Pro Val Pro Val Cys Glu Lys
 385 390 395 400
 Gly Cys Gln Ala Pro Pro Lys Ile Ile Asn Gly Gln Lys Glu Asp Ser
 405 410 415
 Tyr Leu Leu Asn Phe Asp Pro Gly Thr Ser Ile Arg Tyr Ser Cys Asp
 420 425 430
 Pro Gly Tyr Leu Leu Val Gly Glu Asp Thr Ile His Cys Thr Pro Glu
 435 440 445
 Gly Lys Trp Thr Pro Ile Thr Pro Gln Cys Thr Val Ala Glu Cys Lys
 450 455 460
 Pro Val Gly Pro His Leu Phe Lys Arg Pro Gln Asn Gln Phe Ile Arg
 465 470 475 480
 Thr Ala Val Asn Ser Ser Cys Asp Glu Gly Phe Gln Leu Ser Glu Ser



His Gly Tyr Lys Leu Asn Lys Thr His Ser Ala Phe Ser His Asn Asp
 785 790 795 800
 Ile Val His Phe Val Cys Asn Gln Gly Phe Ile Met Asn Gly Ser His
 805 810 815
 Leu Ile Arg Cys His Thr Asn Asn Thr Trp Leu Pro Gly Val Pro Thr
 820 825 830
 Cys Ile Arg Lys Ala Ser Leu Gly Cys Gln Ser Pro Ser Thr Ile Pro
 835 840 845
 Asn Gly Asn His Thr Gly Gly Ser Ile Ala Arg Phe Pro Pro Gly Met
 850 855 860
 Ser Val Met Tyr Ser Cys Tyr Gln Gly Phe Leu Met Ala Gly Glu Ala
 865 870 875 880
 Arg Leu Ile Cys Thr His Glu Gly Thr Trp Ser Gln Pro Pro Pro Phe
 885 890 895
 Cys Lys Glu Val Asn Cys Ser Phe Pro Glu Asp Thr Asn Gly Ile Gln
 900 905 910
 Lys Gly Phe Gln Pro Gly Lys Thr Tyr Arg Phe Gly Ala Thr Val Thr
 915 920 925
 Leu Glu Cys Glu Asp Gly Tyr Thr Leu Glu Gly Ser Pro Gln Ser Gln
 930 935 940
 Cys Gln Asp Asp Ser Gln Trp Asn Pro Pro Leu Ala Leu Cys Lys Tyr
 945 950 955 960
 Arg Arg Trp Ser Thr Ile Pro Leu Ile Cys Gly Ile Ser Val Gly Ser
 965 970 975
 Ala Leu Ile Ile Leu Met Ser Val Gly Phe Cys Met Ile Leu Lys His
 980 985 990
 Arg Glu Ser Asn Tyr Tyr Thr Lys Thr Arg Pro Lys Glu Gly Ala Leu
 995 1000 1005
 His Leu Glu Thr Arg Glu Val Tyr Ser Ile Asp Pro Tyr Asn Pro
 1010 1015 1020
 Ala Ser
 1025
 <110> 6
 <111> 135
 <112> PRT
 <113> Mus musculus
 <400> 6

Glu Ile Ser Cys Asp Pro Pro Pro Glu Val Lys Asn Ala Arg Lys Pro
1 5 10 15

Tyr Tyr Ser Leu Pro Ile Val Pro Gly Thr Val Leu Arg Tyr Thr Cys
20 25 30

Ser Pro Ser Tyr Arg Leu Ile Gly Glu Lys Ala Ile Phe Cys Ile Ser
35 40 45

Glu Asn Gln Val His Ala Thr Trp Asp Lys Ala Pro Pro Ile Cys Glu
50 55 60

Ser Val Asn Lys Thr Ile Ser Cys Ser Asp Pro Ile Val Pro Gly Gly
65 70 75 80

Phe Met Asn Lys Gly Ser Lys Ala Pro Phe Arg His Gly Asp Ser Val
85 90 95

Thr Phe Thr Cys Lys Ala Asn Phe Thr Met Lys Gly Ser Lys Thr Val
100 105 110

Trp Cys Gln Ala Asn Glu Met Trp Gly Pro Thr Ala Leu Pro Val Cys
115 120 125

Glu Ser Asp Phe Pro Leu Glu
130 135

<210> 7

<211> 310

<212> PRT

<213> Homo sapiens

<400> 7

Met Leu Asp Ala Glu Arg Leu Lys His Leu Ile Val Thr Pro Ser Gly
1 5 10 15

Ala Gly Glu Gln Asn Met Ile Gly Met Thr Pro Thr Val Ile Ala Val
20 25 30

His Tyr Leu Asp Glu Thr Glu Gln Trp Glu Lys Phe Gly Leu Glu Lys
35 40 45

Arg Gln Gly Ala Leu Glu Leu Ile Lys Lys Gly Tyr Thr Gln Gln Leu
50 55 60

Ala Phe Arg Gln Pro Ser Ser Ala Phe Ala Ala Phe Val Lys Arg Ala
65 70 75 80

Pro Ser Thr Trp Leu Thr Ala Tyr Val Val Lys Val Phe Ser Leu Ala
85 90 95

Val Asn Leu Ile Ala Ile Asp Ser Gln Val Leu Cys Gly Ala Val Lys
100 105 110

Trp Leu Ile Leu Glu Lys Gln Lys Pro Asp Gly Val Phe Gln Glu Asp
 115 120 125

Ala Pro Val Ile His Gln Glu Met Ile Gly Gly Leu Arg Asn Asn Asn
 130 135 140

Glu Lys Asp Met Ala Leu Thr Ala Phe Val Leu Ile Ser Leu Gln Glu
 145 150 155 160

Ala Lys Asp Ile Cys Glu Glu Gln Val Asn Ser Leu Pro Gly Ser Ile
 165 170 175

Thr Lys Ala Gly Asp Phe Leu Glu Ala Asn Tyr Met Asn Leu Gln Arg
 180 185 190

Ser Tyr Thr Val Ala Ile Ala Gly Tyr Ala Leu Ala Gln Met Gly Arg
 195 200 205

Leu Lys Gly Pro Leu Leu Asn Lys Phe Leu Thr Thr Ala Lys Asp Lys
 210 215 220

Asn Arg Trp Glu Asp Pro Gly Lys Gln Leu Tyr Asn Val Glu Ala Thr
 225 230 235 240

Ser Tyr Ala Leu Leu Ala Leu Leu Gln Leu Lys Asp Phe Asp Phe Val
 245 250 255

Pro Pro Val Val Arg Trp Leu Asn Glu Gln Arg Tyr Tyr Gly Gly Gly
 260 265 270

Tyr Gly Ser Thr Gln Ala Thr Phe Met Val Phe Gln Ala Leu Ala Gln
 275 280 285

Tyr Gln Lys Asp Ala Pro Asp His Gln Glu Leu Asn Leu Asp Val Ser
 290 295 300

Leu Gln Leu Pro Ser Arg
 305 310

<210> 8
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 8

Met Leu Asp Ala Glu Arg Leu Lys His Leu Ile Val Thr Pro Ser Gly
 1 5 10 15

Ala Gly Glu Gln Asn Met Ile Gly Met Thr Pro Thr Val Ile Ala Val
 20 25 30

His Tyr Leu Asp Glu Thr Glu Gln Trp Glu Lys Phe Gly Leu Glu Lys
 35 40 45

Arg Gln Gly Ala Leu Glu Leu Ile Lys Lys Gly Tyr Thr Gln Gln Leu
 50 55 60
 Ala Phe Arg Gln Pro Ser Ser Ala Phe Ala Ala Phe Val Lys Arg Ala
 65 70 75 80
 Pro Ser Thr Trp Leu Thr Ala Tyr Val Val Lys Val Phe Ser Leu Ala
 85 90 95
 Val Asn Leu Ile Ala Ile Asp Ser Gln Val Leu Cys Gly Ala Val Lys
 100 105 110
 Trp Leu Ile Leu Glu Lys Gln Lys Pro Asp Gly Val Phe Gln Glu Asp
 115 120 125
 Ala Pro Val Ile His Gln Glu Met Ile Gly Gly Leu Arg Asn Asn Asn
 130 135 140
 Glu Lys Asp Met Ala Leu Thr Ala Phe Val Leu Ile Ser Leu Gln Glu
 145 150 155 160
 Ala Lys Asp Ile Cys Glu Glu Gln Val Arg Ser Leu Pro Gly Ser Ile
 165 170 175
 Thr Lys Ala Gly Asp Phe Leu Glu Ala Asn Tyr Met Asn Leu Gln Arg
 180 185 190
 Ser Tyr Thr Val Ala Ile Ala Gly Tyr Ala Leu Ala Gln Met Gly Arg
 195 200 205
 Leu Lys Gly Pro Leu Leu Asn Lys Phe Leu Thr Thr Ala Lys Asp Lys
 210 215 220
 Asn Arg Trp Glu Asp Pro Gly Lys Gln Leu Tyr Asn Val Glu Ala Thr
 225 230 235 240
 Ser Tyr Ala Leu Leu Ala Leu Leu Gln Leu Lys Asp Phe Asp Phe Val
 245 250 255
 Pro Pro Val Val Arg Trp Leu Asn Glu Gln Arg Tyr Tyr Gly Gly Gly
 260 265 270
 Tyr Gly Ser Thr Gln Ala Thr Phe Met Val Phe Gln Ala Leu Ala Gln
 275 280 285
 Tyr Gln Lys Asp Ala Pro Asp His Gln Glu Leu Asn Leu Asp Val Ser
 290 295 300
 Leu Gln Leu Pro Ser Arg
 305 310
 <210> 9
 <211> 310
 <212> PRT

<213> Homo sapiens

<400> 9

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Met Leu Asp Ala Glu Arg Leu Lys His Leu Ile Val Thr Pro Ser Gly
1          5          10          15

Ala Gly Glu Gln Asn Met Ile Gly Met Thr Pro Thr Val Ile Ala Val
          20          25          30

His Tyr Leu Asp Glu Thr Glu Gln Trp Glu Lys Phe Gly Leu Glu Lys
          35          40          45

Arg Gln Gly Ala Leu Glu Leu Ile Lys Lys Gly Tyr Thr Gln Gln Leu
          50          55          60

Ala Phe Arg Gln Pro Ser Ser Ala Phe Ala Ala Phe Val Lys Arg Ala
65          70          75          80

Pro Ser Thr Trp Leu Thr Ala Tyr Val Val Lys Val Phe Ser Leu Ala
          85          90          95

Val Asn Leu Ile Ala Ile Asp Ser Gln Val Leu Cys Gly Ala Val Lys
          100          105          110

Trp Leu Arg Arg Glu Lys Gln Lys Pro Asp Gly Val Phe Gln Glu Asp
          115          120          125

Ala Pro Val Ile His Gln Glu Met Ile Gly Gly Leu Arg Asn Asn Asn
          130          135          140

Glu Lys Asp Met Ala Leu Thr Ala Phe Val Leu Ile Ser Leu Gln Glu
145          150          155          160

Ala Lys Asp Ile Cys Glu Glu Gln Val Ala Ser Leu Pro Gly Ser Ile
          165          170          175

Thr Lys Ala Gly Asp Phe Leu Glu Ala Asn Tyr Met Asn Leu Gln Arg
          180          185          190

Ser Tyr Thr Val Ala Ile Ala Gly Tyr Ala Leu Ala Gln Met Gly Arg
          195          200          205

Leu Lys Gly Pro Leu Leu Asn Lys Phe Leu Thr Thr Ala Lys Asp Lys
          210          215          220

Asn Arg Trp Glu Asp Pro Gly Lys Gln Leu Tyr Asn Val Glu Ala Thr
225          230          235          240

Ser Tyr Ala Leu Leu Ala Leu Leu Gln Leu Lys Asp Phe Asp Phe Val
          245          250          255

Pro Pro Val Val Arg Trp Leu Asn Glu Gln Arg Tyr Tyr Gly Gly Gly
          260          265          270

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Tyr Gly Ser Thr Gln Ala Thr Phe Met Val Phe Gln Ala Leu Ala Gln
275 280 285

Tyr Gln Lys Asp Ala Pro Asp His Gln Glu Leu Asn Leu Asp Val Ser
290 295 300

Leu Gln Leu Pro Ser Arg
305 310